ADVANCED NAVIGATION

Kinematica API Reference Manual

Table of Contents

1 Revision History

Version	Date	Changes
1.2	06/02/2018	Updated section 6.1.2.4 to correct error Updated section 6.1.2.7 to correct error URL updated throughout document Updated for API v1.2
1.1	29/05/2017	Updated for API v1.1
1.0	23/01/2017	Initial Release

Table 1: Revision history

2 API Software Changelog

Version	Date	Changes
1.2	06/02/2018	URL change to https://hq.advancednavigation.com.au/kinematica (old www URL will redirect)
1.1	27/06/2017	Changed version schematic to have major and minor revisions New Data Set: - Changed ANPP file to Primary Rover Files - Added support for Secondary Rover Files - Rover files supported include .anpp, .o, .d, .o.Z and .d.Z. - Changed sendEmail from an integer string to a boolean string. Data Set Files: - Added a category field for files. Category can be “primary”, “secondary”, “basestation”, “ephemeris” or “postprocessed” All Data Sets: - Changed ANPP file field to primary file. - Added secondary file field for each file - Added ephemeris source field for each file
1.0	23/01/2017	Initial Release

3 Introduction

This document covers the integration of Advanced Navigation's Kinematica post-processing software into customer applications via the Kinematica API.

Kinematica is web based post-processing software that runs in the cloud and the Kinematica API is a set of HTTP calls that allow customers to post-process data in the Kinematica cloud cluster.

Post-processing involves a very high CPU and memory load, the benefit of processing in the cloud is that these requirements are offloaded to a high end cloud cluster and low end, low power devices can be used to post-process data with the only requirement being an internet connection.

A Kinematica account is required to use the API.

This is a HTTP based API.

There are three main types of HTTP requests used in the API.

- Requests involving retrieving statuses or files : GET
- Requests involving file uploads: POST multipart/form-data
- Requests involving creating or updating configurations: POST application/x-www-form-urlencoded

Replies from the API are JSON formatted.

4 Authentication

All requests done through the API are connected to an account and must be authenticated.

To authenticate any request while using the API the user's API key just needs to be included in the request.

e.g.
https://hq.advancednavigation.com.au/kinematica/api/alldatasets?v=1&apiKey=API_KEY

The account specific API key can be found on the accounts page. Please see Illustration 1 below.

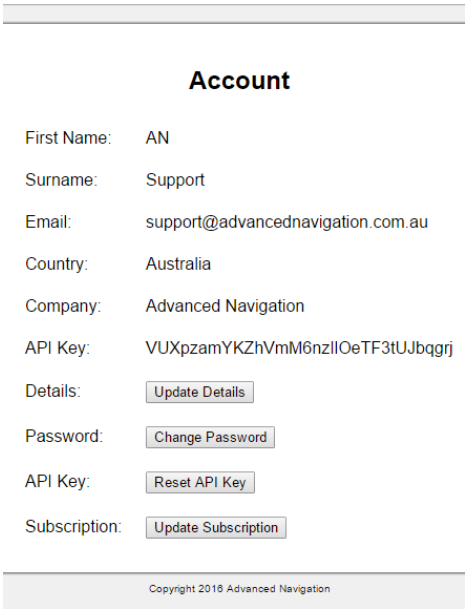

Illustration 1: Screenshot of Kinematica account page showing API key

5 Versioning

All API calls must include an API version number. If the API version provided by a request is incompatible with the current API version on the server, the server will reply with the response below.

```
{"success" : "false", "message" : "Incompatible API Version”}
```

The API will be updated over time. Versions will follow the schematic of major.minor. i.e. Version 2.3 has a major version of 2 and a minor change of 3. Minor revisions will maintain backwards compatibility. Major revisions will not maintain backwards compatibility. Users of the API will be given a time frame to port to the new API during any major changes before the old API is deprecated.

6 API Calls

6.1 New Data Set

Creates a new data set.

6.1.1 Request

POST multipart/form-data
https://hq.advancednavigation.com.au/kinematica/api/newdataset

6.1.2 Parameters

6.1.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.1.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account’s API key

6.1.2.3 Primary Rover Files

Name:	primaryFiles[0]
Content-Type:	application/octet-stream
Required:	Yes
Filename:	Must contain alphanumeric characters, fullstops, spaces, hyphens and underscores only.
Description:	The primary rover file to be processed in the new data set. Supported rover file formats include .anpp, .o, .d, .o.Z and .d.Z.

6.1.2.4 Secondary Rover Files

Name:	secondaryFiles[0]
Content-Type:	application/octet-stream
Required:	No
Filename:	Must contain alphanumeric characters, fullstops, spaces, hyphens and underscores only.
Description:	The secondary rover file to be processed in the new data set. Supported rover file formats include .anpp, .o, .d, .o.Z and .d.Z. Multiple secondary rover files can be provided where they can be added using the names secondaryFiles[0], secondaryFiles[1], ..., secondaryFiles[n].

6.1.2.5 Data Set Name

Name:	name
Content-Type:	text/plain
Required:	No. A data set name will be generated if not present.
Description:	The data set name for the new data set. The data set name must be unique. The data set name can only contain alphanumeric characters, spaces, hyphens and underscores.

6.1.2.6 Base Station Source Selection

Name:	baseStationSource
Content-Type:	text/plain
Required:	No. Defaults to automatic if not present.
Description:	The base station source for the new data set. The base station source options are: • 0: None (Don't use base station files) • 1: Automatic (Allow the server to automatically retrieve the best available base station files) • 2: Manual (Manually provide base station files) If the base station source is set to manual, base station files must be provided by the user.

6.1.2.7 Base Station Files

Name:	baseStationFiles
Content-Type:	application/octet-stream
Required:	Only required if base station source is set to manual.
Filename:	Must contain only alphanumeric characters, fullstops, spaces, hyphens and underscores.
Description:	The user provided base station files for the new data set. Not required if the base station source is set to none or automatic. Multiple base station files can be provided. For a single base station file, the file should be set to the parameter baseStationFiles[0] . For three base station files, the three files should be set in the parameters baseStationFiles[0], baseStationFiles[1], baseStationFiles[2]. Base station files must be o, o.Z, d or d.Z files.

6.1.2.8 Ephemeris Source Selection

Name:	ephemerisSource
Content-Type:	text/plain
Required:	No. Defaults to automatic if not present.
Description:	The ephemeris source for the new data set. The ephemeris source options are: • 1: Automatic (Allow the server to automatically retrieve ephemeris files) • 2: Supplement (Provide ephemeris files to supplement the servers ephemeris files). If the ephemeris source is set to supplement, ephemeris files must be provided by the user.

6.1.2.9 Ephemeris Files

Name:	ephemerisFiles
Content-Type:	application/octet-stream
Required:	Only required if ephemeris source is set to supplement.
Filename:	Must contain only alphanumeric characters, fullstops, spaces, hyphens and underscores.
Description:	The user provided ephemeris files for the new data set. Not required if the epehemeris source is set to automatic. Multiple ephemeris files can be provided. The ephemeris files should be provided in chronological order and as ephemerisFiles[0], ephemerisFiles[1], ..., ephemerisFiles[n]. i.e. For a single ephemeris file, the file should be set to the parameter ephemerisFiles[0] . For three ephemeris files, the three files should be set in the parameters ephemerisFiles[0], ephemerisFiles[1], ephemerisFiles[2]. Ephemeris files must be n, g or p files.

6.1.2.10 Send Email Notification

Name:	sendEmail
Content-Type:	text/plain
Required:	No. Defaults to no email notification if not present.
Description:	The setting which sets if the user should be notified when processing has been completed. Send email options are: • false: No • true: Yes

6.1.3 Successful Response

```
{
  "success": "true",
  "message": "successful",
  "dataset": {
    "id": 1,
    "name": "Data Set 1",
    "primaryFiles": ["Log.anpp"],
    "secondaryFiles": [],
    "baseStationSource": 1,
    "ephemerisSource": 1,
    "sendEmail": "false"
  }
```

}

6.1.3.1 Dataset

Name:	dataset
Description:	Contains subelement details of the new dataset created.

6.1.3.2 ID

Name:	id
Description:	The id of the created data set. Used to access the data set in other API calls.

6.1.3.3 Name

Name:	name
Description:	The name of the created data set.

6.1.3.4 Primary Rover Files

Name:	primaryFiles
Description:	An array of all the primary files in the data set.

6.1.3.5 Secondary Rover Files

Name:	secondaryFiles
Description:	An array of all the secondary files in the data set.

6.1.3.6 Base Station Source Type

Name:	baseStationSource
Description:	The base station source of the created data set. The base station source options are: • 0: None (Don’t use base station files) • 1: Automatic (Allow the server to automatically retrieve the best available base station files) • 2: Manual (Manually provide base station files)

6.1.3.7 Send Email on Processing Completion

Name:	sendEmail
Description:	The setting which sets if the user should be notified when processing has been completed. Send email options are: • false: No • true: Yes

6.1.4 Error Responses

6.1.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API Key"}
```

6.1.4.2 Invalid API Version

```
{"success" : "false" , "message" : "Invalid API Version"}
```

6.1.4.3 Invalid Base Station Source

```
{"success" : "false" , "message" : "Invalid Base Station Source"}
```

6.1.4.4 Invalid Send Email

```
{"success" : "false" , "message" : "Invalid Send Email"}
```

6.1.4.5 Invalid fields

```
{"success" : "false" , "message" : "Invalid Fields”}
```

6.2 Retrieve Antenna List

This request returns the list of available antenna options in Kinematica.

6.2.1 Request

GET
https://hq.advancednavigation.com.au/kinematica/api/antennaoptions

6.2.2 Parameters

6.2.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.2.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account's API key

6.2.3 Successful Response

```
{
  "success": "true",
  "options": [
    "Automatically select using RINEX file",
    "3S-02-TSADM     NONE",
    "3S-02-TSATE     NONE",
    "ACC123CGNSSA_XN NONE",
    …,
  ]
}
```

6.2.3.1 Antenna Options

Name:	options
Description:	An array of available antenna profiles in Kinematica.

6.2.4 Error Responses

6.2.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API Key"}
```

6.2.4.2 Invalid API Version

```
{"success" : "false" , "message" : "Invalid API Version"}
```

6.3 Edit Data Set Configuration

Edit the configuration of a data set.
Must be called on a new data set before processing.

6.3.1 Request

POST application/x-www-form-urlencoded
https://hq.advancednavigation.com.au/kinematica/api/editconfiguration

6.3.2 Parameters

6.3.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.3.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account’s API key

6.3.2.3 Data Set ID

Name:	id
Content-Type:	text/plain
Required:	Yes
Description:	The data set ID.

6.3.2.4 Base Station Antenna

Name:	baseStationAntenna
Content-Type:	text/plain
Required:	No. Defaults to “Automatically select using RINEX file” if not specified.
Description:	The antenna model that is installed on the base station. Setting the correct antenna model for the base station improves results. A list of available antenna models can be retrieved through the retrieve antenna list API call, see section 6.2.

6.3.2.5 Rover Antenna

Name:	roverAntenna
Content-Type:	text/plain
Required:	No. Defaults to “ACCG5ANT_42AT1 NONE” if not specified.
Description:	The antenna model that is installed on the rover. Setting the correct antenna model for the rover improves results. A list of available antenna models can be retrieved through the retrieve antenna list API call, see section 6.2.

6.3.2.6 Device ID

Name:	deviceId
Content-Type:	text/plain
Required:	No. If not specified, an attempt to retrieve it from the ANPP file will be made. If the device information packet is not present in the ANPP file it will default to Spatial Dual (ID 5).
Description:	The device ID of the GNSS/INS providing the ANPP file.

6.3.2.7 GNSS Antenna Offset Source

Name:	gnssOffsetSource
Content-Type:	text/plain
Required:	No. If not specified it defaults to automatically acquired from the log file configuration.
Description:	The GNSS antenna offset source. The GNSS antenna offset source options are: • 0: Manual (use manual gnss antenna offset values, see section 6.3.2.8) • 1: Automatic (from log file) If the GNSS antenna offset source is set to automatic the values will be taken from the alignment configuration packet in the ANPP log file. If this packet does not exist in the ANPP log file the values will default to zero.

6.3.2.8 Manual GNSS Antenna Offset Values

Name:	gnssOffset
Content-Type:	text/plain
Required:	No. Only required if GNSS antenna offset source is set to manual.
Description:	Manual GNSS antenna offset values. Ignored if the GNSS antenna offset source is not set to manual. There are three fields to this element. • gnssOffset[0]: GNSS X offset • gnssOffset[1]: GNSS Y offset • gnssOffset[2]: GNSS Z offset

6.3.2.9 Odometer Offset Source

Name:	odometerOffsetSource
Content-Type:	text/plain
Required:	No. If not specified it defaults to automatically acquired from the log file configuration.
Description:	The odometer offset source. The odometer offset source options are: • 0: Manual (use manual odometer offset values, see section 6.3.2.10) • 1: Automatic (from log file) If the odometer offset source is set to automatic the values will be taken from the alignment configuration packet in the ANPP log file. If this packet does not exist in the ANPP log file the values will default to zero.

6.3.2.10 Manual Odometer Offset Values

Name:	v
Content-Type:	text/plain
Required:	No. Only required if odometer offset source is set to manual.
Description:	The odometer offset. Ignored if odometer offset source is not manual. There are three fields to this element. ◦ odometerOffset[0]: Odometer X offset ◦ odometerOffset[1]: Odometer Y offset odometerOffset[2]: Odometer Z offset

6.3.2.11 Dual Antenna Offset Source

Name:	dualAntennaOffsetSource
Content-Type:	text/plain
Required:	No. Defaults to automatically acquired from the log file configuration if not specified.
Description:	The dual antenna offset source. The dual antenna offset source options are: • 0: Manual (use manual dual antenna offset settings, see sections 6.3.2.12, 6.3.2.13 and 6.3.2.14) • 1: Automatic (from log file) If the dual antenna offset source is set to automatic the values will be taken from the dual antenna configuration packet in the ANPP log file. If this packet does not exist in the ANPP log file the dual antenna offset will default to automatic with primary antenna forward and secondary antenna backwards.

6.3.2.12 Manual Dual Antenna Offset Type

Name:	dualAntennaOffsetType
Content-Type:	text/plain
Required:	No. If not specified it defaults to automatic.
Description:	The manual dual antenna offset source. The dual antenna offset source options are: • 0: Manual (use manual dual antenna offset fixed values, see section 6.3.2.14) • 1: Automatic (automatically calculate offset based on antenna positioning in manual dual antenna offset automatic offset type, see section 6.3.2.13) This field is only used if dual antenna offset source is set to manual.

6.3.2.13 Manual Dual Antenna Offset Automatic Offset Type

Name:	dualAntennaAutomaticOffset
Content-Type:	text/plain
Required:	Only required if manual dual antenna offset type is set to automatic.
Description:	The manual dual antenna automatic offset type. Ignored if the manual dual antenna offset type is not automatic. The manual dual antenna automatic offset type options are: • 0: Primary Front and Secondary Rear • 1: Primary Rear and Secondary Front • 2: Primary Right and Secondary Left • 3: Primary Left and Secondary Right

6.3.2.14 Manual Dual Antenna Offset Fixed Values

Name:	dualAntennaManualOffset
Content-Type:	text/plain
Required:	Only required if manual dual antenna offset type is set to manual.
Description:	The dual antenna manual offset fixed values. Ignored if the manual dual antenna offset type is not manual. There are three fields to this element. • dualAntennaManualOffset[0]: Dual Antenna X offset. • dualAntennaManualOffset[1]: Dual Antenna Y offset. • dualAntennaManualOffset[2]: Dual Antenna Z offset.

6.3.3 Successful Response

```
{
  "success": "true",
  "message": "successful"
}
```

6.3.4 Error Responses

6.3.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API key"}
```

6.3.4.2 Invalid Data Set Id

```
{"success" : "false" , "message" : "Invalid Data Set"}
```

6.3.4.3 Data Set is not owned by user

```
{"success" : "false" , "message" : "Unauthorised"}
```

6.3.4.4 Data Set is currently processing

```
{"success" : "false" , "message" : "Data Set Busy"}
```

6.3.4.5 Missing Device Id

```
{"success" : "false" , "message" : "Missing Device Id"}
```

6.3.4.6 Invalid Fields

```
{"success" : "false" , "message" : "Invalid Fields"}
```

6.4 Process Data Set

Process the data set.

6.4.1 Request

POST application/x-www-form-urlencoded
https://hq.advancednavigation.com.au/kinematica/api/processdataset

6.4.2 Parameters

6.4.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.4.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account's API key

6.4.2.3 Data Set Id

Name:	id
Content-Type:	text/plain
Required:	Yes
Description:	The data set ID.

6.4.3 Successful Response

```
{
  "success": "true",
  "message": "successful"
}
```

6.4.4 Error Responses

6.4.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API key"}
```

6.4.4.2 Invalid Data Set Id

```
{"success" : "false" , "message" : "Invalid Data Set"}
```

6.4.4.3 Data Set is not owned by user

```
{"success" : "false" , "message" : "Unauthorised"}
```

6.4.4.4 Data Set is currently processing

```
{"success" : "false" , "message" : "Data Set Busy"}
```

6.4.4.5 Configuration not initialised

```
{"success" : "false" , "message" : "Configuration Not Initialised"}
```

6.5 Data Set Files

Get the files in the data set.

6.5.1 Request

GET
https://hq.advancednavigation.com.au/kinematica/api/datasetfiles

6.5.2 Parameters

6.5.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.5.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account's API key

6.5.2.3 Data Set Id

Name:	id
Content-Type:	text/plain
Required:	Yes
Description:	The data set ID.

6.5.3 Successful Response


```
{
  "success": "true",
  "id": "1",
  "name": "Data Set 1",
  "userFiles": [
    {
      "name": "PostProcessed.csv.zip",
      "category": "postprocessed",
      "type": "csv",
      "size": 378758
```

```
    },
    {
      "name": "PostProcessed.gpx.zip",
      "category": "postprocessed",
      "type": "gpx",
      "size": 48764
    },
    {
      "name": "PostProcessed.kml.zip",
      "category": "postprocessed",
      "type": "kml",
      "size": 126018
    },
    {
      "name": "ANPP_log.anpp",
      "category": "primary",
      "type": "anpp",
      "size": 20505360
    }
  ],  "automaticFiles": [
    {
      "name": "brdc3550.16n.Z",
      "category": "ephemeris",
      "type": "n",
      "size": 66413
    },
    {
      "name": "brdc3550.16g.Z",
      "category": "ephemeris",
      "type": "g",
      "size": 84093
    },
    {
      "name": "brdm3550.16p.Z",
      "category": "ephemeris",
      "type": "p",
      "size": 1025435
    },
    {
      "name": "com19282.clk.Z",
      "category": "ephemeris",
      "type": "clk",
      "size": 1184658
    },
    {
      "name": "com19282.sp3.Z",
      "category": "ephemeris",
      "type": "sp3",
      "size": 204195
    }
```

```
  ]
}
```

6.5.3.1 Data Set Id

Name:	id
Description:	The data set id.

6.5.3.2 Data Set Name

Name:	name
Description:	The data set name.

6.5.3.3 User Files

Name:	userFiles
Description:	A list of data set files unique to the current data set owned by the user. Each user file contains subelement details. User files include base station files if the base station source is manual.

6.5.3.4 User File Name

Name:	name
Description:	The file name of the user file.

6.5.3.5 User File Category

Name:	category
Description:	The category of the user file. Category can be “primary”, “secondary”, “basestation”, “ephemeris” or “postprocessed”.

6.5.3.6 User File Type

Name:	type
Description:	The file type of the user file.

6.5.3.7 User File Size

Name:	size
Description:	The file size in bytes of the user file.

6.5.3.8 Automatic Files

Name:	automaticFiles
Description:	A list of data set files automatically retrieved to process the data set. Each automatic file contains subelement details. Automatic files include base station files if the base station source is automatic. Automatic files include the “n”, “g”, “p”, “clk” and “sp3” RINEX files.

6.5.3.9 Automatic File Name

Name:	name
Description:	The file name of the automatic file.

6.5.3.10 Automatic File Category

Name:	category
Description:	The file category of the automatic file. Category can be “basestation” or “ephemeris”.

6.5.3.11 Automatic File Type

Name:	type
Description:	The file type of the automatic file.

6.5.3.12 Automatic File Size

Name:	size
Description:	The file size in bytes of the automatic file.

6.5.3.13

6.5.4 Error Responses

6.5.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API key"}
```

6.5.4.2 Invalid Data Set Id

```
{"success" : "false" , "message" : "Invalid Data Set"}
```

6.5.4.3 Data Set is not owned by user

```
{"success" : "false" , "message" : "Unauthorised"}
```

6.5.4.4 Data Set is currently processing

```
{"success" : "false" , "message" : "Data Set Busy"}
```

6.5.4.5 Configuration not initialised

```
{"success" : "false" , "message" : "Configuration Not Initialised"}
```

6.6 Data Set Status

Get the current status for the data set

6.6.1 Request

GET
https://hq.advancednavigation.com.au/kinematica/api/datasetstatus

6.6.2 Parameters

6.6.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.6.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account's API key

6.6.2.3 Data Set Id

Name:	id
Content-Type:	text/plain
Required:	Yes
Description:	The data set ID.

6.6.3 Successful Response

```
{
  "success": "true",
  "status": {
    "status": "Initialising",
    "currentProgress": 0,
    "totalProgress": 10,
    "processing": true
  }
}
```

6.6.3.1 Data Set Status

Name:	status
Description:	Contains subelement details on the current data set status.

6.6.3.2 Status

Name:	status
Description:	The current processing status of the data set

6.6.3.3 Current Progress

Name:	currentProgress
Description:	The current progress of the current step in processing

6.6.3.4 Total Progress

Name:	totalProgress
Description:	The total progress of processing.

6.6.3.5 Processing

Name:	processing
Description:	If the data set is currently being processed (i.e. Is it busy?)

6.6.4 Error Responses

6.6.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API key"}
```

6.6.4.2 Invalid Data Set Id

```
{"success" : "false" , "message" : "Invalid Data Set"}
```

6.6.4.3 Data Set is not owned by user

```
{"success" : "false" , "message" : "Unauthorised"}
```

6.6.4.4 Invalid Fields

```
{"success" : "false" , "message" : "Invalid Fields"}
```

6.7 Data Set Logs

Get data set logs for a data set which occurred after a specific time.
A maximum of 200 logs are returned at a time.
Subsequent calls must be made to retrieve all the logs if there are more than 200 logs for the data set.

6.7.1 Request

GET
https://hq.advancednavigation.com.au/kinematica/api/datasetlogs

Parameters

6.7.1.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.7.1.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account’s API key

6.7.1.3 Data Set Id

Name:	id
Content-Type:	text/plain
Required:	Yes
Description:	The data set ID.

6.7.1.4 Time

Name:	time
Content-Type:	text/plain
Required:	Yes
Description:	The UNIX timestamp in milliseconds to indicate which log messages to retrieve. The first call should be made with a time of 0 and subsequent calls should be called using the last known data set log time.

6.7.2 Successful Response


```
{
  "success": "true",
  "lastTime": "1483940057202",
  "logs": [
    {
      "type": "info",
      "message": "Log file start time is 22:51:51 20th Dec 2016 UTC",
      "time": 1483940056570
    },
    {
      "type": "info",
      "message": "Log file end time is 23:31:26 20th Dec 2016 UTC",
      "time": 1483940056586
    },
    {
      "type": "info",
      "message": "ANPP file is approximately 40 minute(s)",
      "time": 1483940056654
    },
    {
      "type": "info",
      "message": "Charging 40 minute(s) of credits to your account",
      "time": 1483940056739
    },
    {
      "type": "debug",
      "message": "GPS Files: brdc3550.16n.Z",
      "time": 1483940057023
    },
    ...
  ]
}
```

6.7.2.1 Data Set Logs Last Time

Name:	lastTime
Description:	The time of the last log message in the current list of log messages.

6.7.2.2 Data Set Logs

Name:	logs
Description:	A list of data set logs. Each data set log contains subelement details.

6.7.2.3 Type

Name:	type
Description:	The log message type. Log types include: • debug: For detailed messages • warning: For process warnings • error: For process errors • info: For general messages

6.7.2.4 Message

Name:	message
Description:	The actual log message

6.7.2.5 Time

Name:	time
Description:	The log message timestamp in a unix millisecond timestamp.

6.7.3 Error Responses

6.7.3.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API key"}
```

6.7.3.2 Invalid Data Set Id

```
{"success" : "false" , "message" : "Invalid Data Set"}
```

6.7.3.3 Data Set is not owned by user

```
{"success" : "false" , "message" : "Unauthorised"}
```

6.8 Download File

Downloads a file from a specified data set.
File names can be retrieved from the data set API response.
The API returns the file as an application/octet-stream with Content-Disposition: attatchment; filename={FILE_NAME} set.

6.8.1 Request

GET
https://hq.advancednavigation.com.au/kinematica/api/downloadfile

6.8.2 Parameters

6.8.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.8.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account’s API key

6.8.2.3 Data Set Id

Name:	id
Content-Type:	text/plain
Required:	Yes
Description:	The data set ID.

6.8.2.4 File name

Name:	filename
Content-Type:	text/plain
Required:	Yes
Description:	The filename of the file.

6.8.3 Successful Response

API returns the file as an application/octet-stream with Content-Disposition: attatchment; filename={FILE_NAME}

6.8.4 Error Responses

6.8.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API key"}
```

6.8.4.2 Invalid Data Set Id

```
{"success" : "false" , "message" : "Invalid Data Set"}
```

6.8.4.3 Data Set is not owned by user

```
{"success" : "false" , "message" : "Unauthorised"}
```

6.8.4.4 Data Set is currently processing

```
{"success" : "false" , "message" : "Data Set Busy"}
```

6.8.4.5 Invalid File

```
{"success" : "false" , "message" : "Invalid File"}
```

6.9 All Data Sets

Gets a list of the data sets for the user.

6.9.1 Request

GET
https://hq.advancednavigation.com.au/kinematica/api/alldatasets

6.9.2 Parameters

6.9.2.1 API Version

Name:	v
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica API version number

6.9.2.2 API Key

Name:	apiKey
Content-Type:	text/plain
Required:	Yes
Description:	The Kinematica account’s API key

6.9.3 Successful Response


```
{
  "success": "true",
  "datasets": [
    {
      "id": 1,
      "name": "Data Set 1",
      "primaryFiles": [
        "log.anpp"
      ],
      "secondaryFiles": [

      ],
      "baseStationSource": 2,
      "ephemerisSource": 2,
      "sendEmail": false
    },
    {
      "id": 2,
      "name": "Data Set 2",
      "primaryFiles": [
        "SpatialLog_SPLIT.anpp"
],
      "secondaryFiles": [

      ],
      "baseStationSource": 0,
      "ephemerisSource": 1,
      "sendEmail": false
    }
  ]
}
```

6.9.3.1 Data Sets

Name:	datasets
Description:	A list of data sets. Each data set contains subelement details.

6.9.3.2 ID

Name:	id
Description:	The id of the data set.

6.9.3.3 Name

Name:	name
Description:	The name of the data set.

6.9.3.4 ANPP File Name

Name:	anppFileName
Description:	The file name of the anpp file in the data set.

6.9.3.5 Base Station Source

Name:	baseStationSource
Description:	The base station source for this data set. The base station source options are: • 0: None (Don't use base station files) • 1: Automatic (Allow the server to automatically retrieve the best available base station files) • 2: Manual (Manually provide base station files)

6.9.4 Error Responses

6.9.4.1 Invalid API Key

```
{"success" : "false" , "message" : "Invalid API key"}
```

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